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SUB CODE: 04,08 / SUBM DATE: 15Mar65/ ORIG REF: 322/ OTH REF: 010/

Card 2/2

VERBOLEV, V.I.

Temperature regime of the Listvenichnyy Bay of Lake Baikal.  
Trudy Inst. 5:38-51 '64. (MIR 17:11)

VERBOLOV, V.I.; ISFAL, V.V.

Solar heat received on Lake Baikal. Trudy Lim. Inst. 5:179-187 '64.  
(MIRA 17:11)

KLESHNIN, A.F.; SHUL'GIN, I.A.; VERBOLOVA, M.I.

Optical properties of plant leaves. Bot. zhur. 45 no.4:492-506  
Ap '60. (MIRA 14:5)

1. Institut fiziologii rasteniy im. K. A. Timiryazeva AN SSSR i  
Laboratoriya biologii razvitiya rasteniy Moskovskogo gosudarst-  
vennogo universiteta.

(Leaves—Optical properties)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Optical properties of plant leaves containing anthocyanins.  
Biul. MOIP. Otd. biol. 65 no. 4:77-83 Ju-Ag '60. (MIRA 13:10)  
(LEAVES--OPTICAL PROPERTIES) (ANTHOCYANIN)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VEROLOVA, M.I.; PODOL'NYY, V.Z.

Studying optical properties of leaves in woody plants with  
the SF-4 spectrophotometer. Fiziol.rast. 7 no.3:300-308  
'60. (MIRA 13:6)  
I. K.A. Timiryazev Institute of Plant Physiology, U.S.S.R.  
Academy of Sciences, Moscow.  
(Leaves--Optical properties) (Spectrophotometry)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERPOLOVA, M.I.

Relation between optical properties and structural characters in  
plant leaves. Nauch. dokl. vys. shkoly; biol. nauki no.1:132-135  
'60. (MIRA 13:2)

1. Rekomendovana laboratoriya biologii razvitiya rasteniy Moskov-  
skogo gosuiarstvennogo universiteta im. M.V. Lomonosova i Institutom  
fiziologii rasteniy AN SSSR.

(Leaves--Optical properties)

~~V. V. VINOGRADOV  
V. I.~~

On currents in Lake Baikal. Dokl. AM SSSR 112 no.2:307-310 Ja '57.  
(MIRA 10:4)

1. Baykal'skaya limnologicheskaya stantsiya Vostochno-Sibirsakogo  
filiala Akademii nauk SSSR. Predstavлено akademikom,  
(Baikal, lake)

VERBOLOV, V.I.

Currents in the Maloye More. Trudy Baik.limnol.sta, 17:34-53  
'59. (MIRA 12:12)  
(Maloye More--Hydrology)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Role of anthocyanins in the absorption of radiation energy by  
plant leaves. Nauch.dokl.vys.shkoly; biol.nauki no.2:166-174  
'59. (MIRA 12:6)

1. Rekomendovana kafedroy darvinizma gosudarstvennogo universiteta  
im. M.V.Lomonosova.  
(Anthocyanin) (Solar radiation) (Leaves)

SHUL'GIN, I.A.; KLESHNIN, A.F.; VERBOLOVA, M.I.

Photoelectric determination of the optical properties of plant leaves.  
Fiziol.rast. 5 no.5:473-476 S-O '58. (MIRA 11:11)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR, Moskva  
i Kafedra darvinizma Moskovskogo gosudarstvennogo universiteta, Moskva.  
(Leaves--Optical properties) (Photoelectric measurements)

SHUL'GIN, I.A.; VERBOLOVA, M.I.

Optical properties of leaves of aquatic plants. Nauch.dokl.vys.  
shkoly: biol.nauki no.4:167-174 '60. (MIR 13:11)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo  
universiteta im. M.V.Lomonosova i Institutom fiziologii rasteniy  
AN SSSR im. K.A.Timiryazeva.

(AQUATIC PLANTS)  
(LEAVES--OPTICAL PROPERTIES)

5 (0)

AUTHORS: Votintsev, K. K., Verbova, N. V. SOV/20-126-3-54/69

TITLE: On the Influence of Internal Waves and Variations of the Water Level Caused by the Wind on the Hydrochemical Conditions of Lake Baykal (O vliyanii sgonno-nagonnykh yavleniy i vnutrennikh voln na gidrokhimicheskiy rezhim ozera Baykal)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3, pp 650 - 653 (USSR)

ABSTRACT: The investigation of temperature conditions of Lake Baykal carried out in recent years in the area of the Listvenichnoye Settlement (by the Station mentioned under Association) showed rapid and sometimes very considerable temperature jumps in the top water layer of 150 m. The jumps are caused by the phenomena and waves mentioned in the title (Ref 1). Especially sudden temperature jumps occur on the lake surface during the warmest period (August): within 24-48 hours, sometimes even within a few hours, by 7-8°. The dynamics of the water masses must certainly affect the chemical conditions too. In order to clarify this, samples were taken from the 50 m upper layer in summer 1957. A consideration of individual isothermal lines (Fig 1)

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- On the Influence of Internal Waves and Variations of SOV/20-126-3-54/69  
the Water Level Caused by the Wind on the Hydrochemical  
Conditions of Lake Baykal

shows that their vertical range increases with depth. The general modification of all isothermal lines with time and depth is nearly in perfect agreement: the lifting and lowering of single isothermal lines agrees with respect to time. The content of nitrate nitrogen suffers great changes with respect to time and in the vertical (Fig 1, on the right): 14-15 mg/m<sup>3</sup> at a depth of 5 m, until 50-90 mg/m<sup>3</sup> at a depth of 50 m. In spite of these changes with time in all depths investigated, the vertical stratification of the nitrate nitrogen content remained constant: its content increased steadily with depth. A comparison of figures 1 and 2 shows clearly that the total character of the isopleths of the nitrate nitrogen is very similar to that of the isothermal lines. But also their differences must not be overlooked: the maximum amplitude of the spatial distribution of isothermals attains 20-22 m, whereas the mentioned isopleths show an amplitude of 45-47 m. These differences can be best explained by the simultaneous influence of a vertical and horizontal water transport. Also the horizontal irregularity in the distribution of nitrate nitrogen in the same area

Card 2/4

On the Influence of Internal Waves and Variations of SOV/20-126-3-54/69  
the Water Level Caused by the Wind on the Hydrochemical  
Conditions of Lake Baykal

at the end of July and August 1957 points to this fact (Fig 1).  
The picture of the spatial distribution of oxygen with respect  
to time was also analogous (Fig 2). This analogy is abruptly  
disturbed if the  $O_2$ -content is expressed by absolute quantities  
in the building up of the curves. No regular change of the  $O_2$ -  
content was ascertained within 24 hours (day and night). The  
changes in the content of  $CO_2$  (free) agree only in part with  
the isothermals (Fig 2). In the 1st September week, the nitrate  
nitrogen content dropped to the analytical zero point. The au-  
thors try to make some cautious conclusions from these preli-  
minary and very provisional results. There are 2 figures, 2  
tables, and 1 Soviet reference.

Card 3/4

On the Influence of Internal Waves and Variations of SOY/20-126-3-54/69  
the Water Level Caused by the Wind on the Hydrochemical  
Conditions of Lake Baykal

ASSOCIATION: Baykal'skaya limnologicheskaya stantsiya Vostochno-Sibirs'kogo  
filiala Akademii nauk SSSR (Baykal Limnological Station of the  
East-Siberian Branch of the Academy of Sciences, USSR)

PRESENTED: November 21, 1958, by D. V. Nalivkin, Academician

SUBMITTED: November 16, 1958

Card 4/4

VOTINTSEV, K.K.; VERBOLKOVA, N.V.; MESHCHERYAKOVA, A.I.

Horizontal distribution of some components in the upper water  
layer of Lake Baikal. Trudy Lim. inst. 3:95-112 '63.

(MIRA 17:4)

11F

Effect of training on the content of calcium and magnesium in the muscle of rabbits, pigeons and chickens. P. A. Verbovich. Biokhimiya 2, 671-R(1957). - The training consisted in a daily 15 min. irritation of the muscles by an elec. current. The Ca content in the muscles of rabbits, pigeons and chickens increases, and the Mg decreases, under the influence of training. The abs. Ca content of the quiet muscle of the chicken is less than that of rabbits, and of pigeons greater than that of rabbits. H. Cohen

The Chair of Biochemistry of medical Inst.  
Dnepropetrovsk

ASB-LLA METALLURGICAL LITERATURE CLASSIFICATION

EDITION 1969

1672000 04

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EDITION 1969

1672000 04

1820005

VERBOLVICH, P.A.

On the ratio of magnesium to adenosine-triphosphoric acid  
content in muscles. A.M. KASHPUR, P.A. VERPOLOVICH, AND V.I. ROZENGART. ( CHAIR  
OF BIOCHEMISTRY, MEDICAL INSTITUTE, DNIDPROPETROVSK ) vol.3, no.2, p. 270, 1938.

11-D

CA

Hemoglobin and utilization of atmospheric nitrogen in  
root globules of bean family plants. I. A. Verbovich.  
*Invest. Akad. Nauk Kazakh. S.S.R., Ser. Mikrobiol.* No. 1  
(Whole No. 82), 77-85(1949).—Review with 12 references.  
O. M. Komolapoff

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859420011-0

VERSOLOVICH, P. A.

RECORDED AND INDEXED IN THE LIBRARY OF THE COMM. C. I. A. (C. I. A.)

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CC: ~~Chairman of the House Select Committee on Intelligence, U.S. House of Representatives, Washington, D.C.~~

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CIA-RDP86-00513R001859420011-0

CA

118

Myoglobin and its influence in the physiology of living organisms. P. A. Verbolovskii. Uspobi. Sverchnoi Biol. 31, 170-94(1951). Historical review from 1729.  
127 references. Julian F. Smith

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859420011-0"

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CIA-RDP86-00513R001859420011-0

CA

1/F

Myoglobin and its influence in the physiology of living  
organisms. P. A. Verbolovich. Lipetsk. Sovnaukizdat.  
Biol. 31, 170-90 (1951). Historical review from 1728  
127 references.  
Julian F. Smith

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859420011-0"

USSR / Human and Animal Physiology. Blood. Form Elements. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101766.

Author : Verbolovich, P. A.  
Inst : Not given.

Title : On the Problem of the Hemoglobin Content in the  
Blood of Wild and Domestic Animals.

Orig Pub: Kur. biokh. zh., 1957, 29, No 3, 354-360.

Abstract: The content of Hb in E and in blood of black grouse is higher by 18% and 22% than in a rooster of Leghorn breed; in eagles which inhabit high altitudes it is lower by 10-27% than in other representatives of this genus. In wild mammals the amount of Hb and E was higher in all cases than in domestic ones. The muscles of wild animals, especially of the muskrat, mountain goat, cormorant, vulture and sand hare contain more myoglobin

Card 1/2 KAFEDRA biokhimii KAZAKHSKOGO MEDITSINSKOGO  
INST, g. ALMAT-ATA.

USSR / Human and Animal Physiology. Blood. Form Elements. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101766  
APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859420011-0"

Abstract: than the corresponding muscles of the domestic animals. Apparently, the conditions of existence influence the index of muscular pigment. In animal adaptation to the conditions of active existence, creation of a supply of O<sub>2</sub> in the muscles has a great significance. -- E. R. Paley.

Card 2/2

VERBOLOVICH, P.A., kand. biol. nauk.

Myoglobin content of the muscles of different animals as related to  
their conditions if life. Vest. AH Kazakh. SSR 13 no.12:85-91 D '57.  
(MYOGLOBIN) (MUSCLES) (VETERINARY PHYSIOLOGY) (MIRA 11:1)

VIRGINIA, Doc Med Sci 44(1954) "Data *[initials]* on the relationship between the  
activity of agglutinins." Annals Atm, 1954, 24(1): (Yearly Review of Plant), 300 esp-  
cial first article, 1954, 24(1), 300 (11,1-51,102)

-87-

VERBOLOVICH, P.A.

Factors influencing the myoglobin content of muscle [with summary in English]. Vop.med.khim. 4 no.2:83-96 Mr-Ap '58. (MIRA 11:5)

1. Kafedra biokhimii Kazakhskogo meditsinskogo instituta, Alma-Ata.  
(MUSCLES, metabolism  
myoglobin content, influencing factors (Rus)  
(HEMOGLOBIN,  
myoglobin in musc., factors influencing content (Rus))

VERBOLOVICH, P.A.; TANANA, G.D.; PLESHKOVA, S.M.

Histochemical study of the localization of myoglobin in  
muscles. Zdrav. Kazakh. 22 no.9:47-51 '62.

(MIRA 17:2)

l. Iz kafedry biologicheskoy khimii (zav. ~ doktor med.  
nauk P.A. Verbolovich) Kazakhskogo meditsinskogo instituta.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859420011-0

VERBOLOVICH, P.A.

Book reviews. Usp. sovrt. biol. 60 no.3:454-458 N-D 165.  
(MIRA 19:1)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859420011-0"

VERBOLOVICH, Petr Alekseyevich; POLOSUKHINA, Tat'yana Yakovlevna;  
KAIPOVA, Zoya Nikolayevna; MAKEIEV, Aleksandr Fedorovich;  
GOLODOVA, Lidiya Semenovna; POGOZHEV, A.S., red.;  
ROROKINA, Z.P., tekhn. red.

[Laboratory work in organic, physical, colloid, and biological  
chemistry] Praktikum po organicheskoi, fizicheskoi, kolloidnoi  
i biologicheskoi khimii. Alma-Ata, Izd-vo Akad. nauk Kazakh-  
skoi SSR, 1963. 345 p. (MIRA 16:6)  
(CHEMISTRY, MEDICAL AND PHARMACEUTICAL--LABORATORY MANUALS)

VERBOLOVICH, P.A.; PLESHKOVA, S.N.; TANANA, G.D.

Histochemical method for determining myoglobin (preliminary report). Zdrav. kazakh. 21 no.12:29-33 '61. (MIRA 15:3)

1. Iz kafedry biologicheskoy khimii (zav. - doktor meditsinskikh nauk P.A. Verbolovich) Kazakhskogo meditsinskogo instituta i kafedry histologii (zav. - prof. F.M. Mukhamedgaliyev) Alma-Atinskogo zooveterinarnogo instituta.  
(MYOGLOBIN)

VERBOLOVICH, Petr Alekseyevich; BYKOV, V.D., red.; LYUDKOVSKAYA, N.I.,  
tekhn. red.

[Myoglobin and its role in the physiology and pathology of  
animals and man] Mioglobin i ego rol' v fiziologii i patologii  
zhivotnykh i cheloveka. Moskva, Medgiz, 1961. 212 p.  
(MIRA 15:7)

(MYOHEMOGLOBIN)

VAL'KOVICH, P.A., BUD'YKOVA, T.YA., KAL'YVA, Z.N., VALITOVA, L.S.,  
DROGOVA, A.L., KURNOVSKAYA, N.I., RAMINA, Z.A., RASHATNEKVA, L.I.,  
SULAYEVA, L.S., UTKISHEV, A.B., (USSR)

"Special Aspects of the Metabolism of Some Substances in  
Radiation Disease in Dogs."

Report presented at the 5th Int'l. Biochemistry, Congress,  
Moscow 10-16 Aug 1961.

VORONTSKII, V. I. & SHANOVICH, A. S.

Determining the mutagenicogenic effects of angiogenesis inhibitors  
during proliferation. Dokl. Akad. Nauk SSSR 158 no.6 i34-137. 0 '61.  
(MIRA 17(12))

1. Izobrazedskiy gosudarstvennyy universitet im. A.A. Stavrova.  
Predstavitelejka akademika N.M. Siniatkovym.

VERBOLOZ, S.V.

Review of the book "Atlas of lithogenous type middle Carboniferous coal deposits in the Donets Basin" by L.N. Botvinkina and others.  
Geol. zhur. 18 no.6:108-109 '58. (MIRA 12:1)  
(Donets Basin—Coal geology) (Botvinkina, L.N.)

VERBOLOZ, S.Ye.

Karst as a factor in the degasification of gas-bearing formations.  
Trudy VNIIGAZ no.16/24:118-130 '62. (MIRA 15:8)  
(Donets Basin--Karst) (Donets Basin--Gas, Natural--Geology)

VERBOLOZ, S.Ye.

New data on eruptive rocks in the eastern part of the Donets Basin.  
Dokl.AN SSSR 124 no.3:663-665 Ja '59. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut. Predstav-  
leno akademikom N.S. Shatskim.  
(Donets Basin--Rocks, Igneous)

3(8)

AUTHOR:

Verboloz, S. Ye.

SOV/20-124-3-49/67

TITLE:

New Data on the Eruptive Rocks of the Eastern Part of the  
Donbass (Novyye dannyye ob izverzhennykh porodakh vostochnoy  
chasti Donbassa)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 663-665  
(USSR)

ABSTRACT:

In the entire Donetz Basin eruptive rocks are only rarely found. A review of occurrences mentioned in the literature is given (Refs 1,2). In tunnel number 5, in 1945-1957, an eruptive rock was found in stratum i<sup>2</sup><sub>3</sub> "Nesvetayevskiy" and the underlying stratum i<sub>3</sub> "Lutuginskiy". The dike is vertical and bends in a few places (Fig 2). It consists of andesite porphyry (petrographically determined by S. I. Malinin) and is highly altered where it is in contact with argillite. Biotite booklets occur along with plagioclase laths. The booklets are up to 0.1 mm across and have a characteristic pleochroism. The matrix material is volcanic glass, which in a few samples (Numbers 6 and 7) is replaced by carbonate (calcite) to a considerable extent. The dike near its borders has undergone

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New Data on the Eruptive Rocks of the Eastern Part of the Donbass SOV/20-121-3-49/67

considerable auto-hydrothermal alteration. In the bulk of this rock, the plagioclase laths are replaced by fine-grained carbonate (calcite). Thus here the structure is considered a relict-vitrophyre structure. The bulk of the rock in this place lacks biotite. The rock is a porphyritic type in all cases. More dikes are described. Everywhere the contact of the dikes was observed, it was sharp and clear. The contact metamorphism of the intruded sedimentary rock (predominantly argillite and anthracite) is very weak and only noticeable at the contact itself. Only in tunnel number 5 is the contact aureole a few centimeters wide. The argillite became brittle by the heat and developed a considerable mass of secondary sericite. Further from the contact cracks filled with calcite are found. There are 3 figures and 3 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut  
(All Union Scientific Coal Research Institute)

Card 2/3

KIPRIANOV, A.I., VERBOVSKAYA, T.M.

Condensation of nitroacetic ester with o-aminophenylmercapton.  
Zhur. ob. khim. 31 no. 2:531-537 F '61. (MIRA 14:2)

1. Institut organicheskoy khimii AN USSR.  
(Benzeneethiol) (Acetic acid) (Benzothiazine)

VERBULSKAYA, Ic D

115

PHASE I BOOK EXPLOITATION

SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th,  
Moscow, 1950.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii  
(Physicochemical Bases of Steel Making; Transactions of the  
Fifth Conference on the Physicochemical Bases of Steelmaking)  
Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted.  
3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni  
A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy  
of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentaveg.  
Tech. Ed.: V. V. Mikhaylova.

Card 1/16

115

Physicochemical Bases of (Cont.)

SOV/5411

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

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Physicochemical Bases of (Cont.)

SOV/5411

(Zlatoust Metallurgical Plant) A. K. Petrov, Engineer, O. M. Chekhomov, G. A. Khasin, A. I. Markelov, I. S. Kutuyev, R. I. Kolyashnikova, and Ye. D. Mokhir.)]

Paton, B. Ye., B. I. Medovar, Yu. V. Latash, B. I. Maksimovich, and A. F. Tregubenko. Electroslag Remelting of Alloyed Steels and Alloys as an Effective Means for Improving Their Quality

118

Verbol'skaya, Ye. D., G. F. Zasetskiy, I. V. Isakov, and A. Ye. Khlebnikov. Various Methods of Treating Molten Chromium-Nickel-Molybdenum Steel and Their Effect on Its Properties

127

Yedneral, F. P. Application of Complex Deoxidizers for the Purpose of Shortening the Reduction Period of Electromelting of Constructional Steels

137

Yedneral, F. P. The Change in the Bath Composition of an Electric-Card 7/16

S/137/60/000/C09/025/029  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 9, pp. 261 ff.  
# 21636

AUTHORS: Verbol'skaya, Ye.D., Isakov, I.V., Khlebnikov, A.Ye.

TITLE: The Effect of Cerium Admixtures on the Properties of Chrome-Nickel-Molybdenum Steel for Shaped Steel Castings ✓

PERIODICAL: V sb.: Redkozemel'n. elementy v stalyakh i splavakh, Moscow,  
Metallurgizdat, 1959, pp. 118-129

TEXT: A study was made of the effect of Ce introduced in the form of misch metal as a deoxidizer, on the micro- and macrostructure, S distribution, and the mechanical properties of Cr-Ni-Mo steel containing 0.36-0.41% C. Experimental melts were made in 150-kg open and vacuum furnaces with deoxidation by 0.07% Al or 0.2 or 0.3% misch metal. It was established that processing of Cr-Ni-Mo steel with misch metal admixtures (0.2-0.3%) containing 40-60% Ce, increased  $\alpha_k$  of the steel by a factor of 2.0 to 2.5. ✓

T.F.

Translator's note: This is the full translation of the original Russian abstract.  
Card 1/1

18.3200

7/11  
SAC/DOE/DOE-DOE/JR

AUTHORS: Verbol'skaya, Ye. D., Sapegin'skiy, G. I. (Doctor of Technical Sciences, Professor)  
Khlebnikov, A. Ye. (Doctor of Technical Sciences, Professor)

TITLE: Effect of Deoxidation by Calcium-Silicon on Properties of Chrome-Nickel-Molybdenum Steel

PERIODICAL: Stal', 1959, Nr 10, pp 938-942 (USSR)

ABSTRACT: At Lower Dnepr Plant imeni K. Liebknecht (Nizhne-Dneprovskiy zavod imeni K. Libknekht), Magnitogorsk Combine (Magnitogorskiy kombinat) and Combine imeni Serov (kombinat imeni Serova) calcium-silicon deoxidation drastically reduced the number of aluminate inclusions. The beneficial effect of calcium alloys on the distribution and shape of oxynitride inclusions had been previously established /Ref 4, Right, D., Iron and Steel, 1945, Vol 18, Nr 14/. The authors tested calcium silicon in deoxidizing chrome-nickel-molybdenum steel for intricate shape casting with the following purpose: (1) increase of plasticity and ductility of metal, and (2) production of sound castings with fibrous fractures (without intracrystalline fracturing). Throughout all tests melting temperatures were maintained within the

Card 1/4

Effect of Deoxidation by Calcium-Silicon  
on Properties of Chrome-Nickel-Molybdenum Steel

75971

307/123-69-16-34739

1570 to 1600 C range. Two plates cast from each melt into a dry sand-loam mold were heat treated. Bars were cut out after heat treatment, broken under a pile driver for fracture tests, macrocomplets and specimens for tensile and impact strength tests were prepared as well as microsections for the study of nonmetallic inclusions. Mechanical properties data of steel deoxidized by different quantities of calcium are shown by way of comparison in Figure 2. The authors conclude as follows: (1) The substitution of calcium-silicon for aluminum in the final deoxidation of steel improves plasticity and ductility owing to the formation of more favorably shaped nonmetallic inclusions in primary grains; (2) the optimal quantity of calcium-silicon to be introduced to produce steel without surface porosity and with high mechanical properties is 0.15% Ca; (3) evidently, improved plastic properties allow increasing strength characteristics by increasing the carbon content without affecting plasticity (see Table 1). The authors recommend the continuation of experimental deoxidation with calcium-silicon in lieu of aluminum. There are 5 figures; 1 table; and 4 references, 3 Soviet, 1 U.S. The U.S. reference is: Right, D., Iron and Steel, 1956, Vol. 18, Nr. 14.

Card 2/4

Effect of Deoxidation by Calcium-Silicon  
on Properties of Chrome-Nickel-Molybdenum Steel

75971  
SOV/133-59-10-32/39

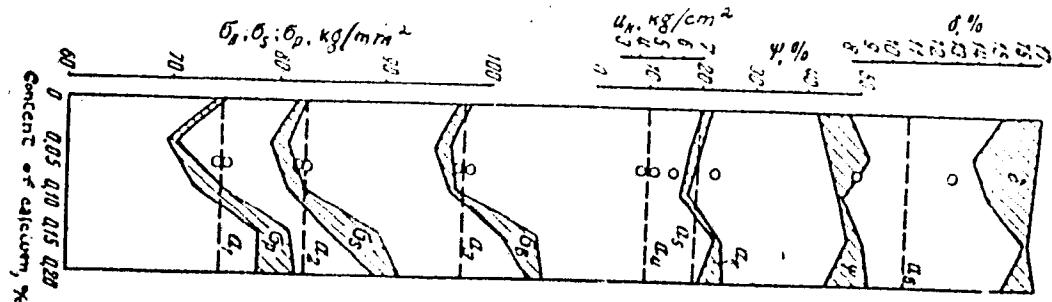


Fig. 2.  $a_1$  -  $a_5$  steel deoxidized with aluminum:  $\sigma_B$  = tensile strength;  $\sigma_s$  = yield limit;  $\sigma_p$  = proportional limit;  $a_k$  = impact strength;  $\psi$  = reduction of area;  $\delta$  = elongation.

Card 3/4

Effect of Deoxidation by Calcium-Silicon  
on Properties of Chrome-Nickel-Molybdenum Steel

75971

SOV/133-59-10-32/39

Performance figures of mechanical properties of chrome-nickel-molybdenum steel samples of industrial (nominator) and experimental (denominator) castings

Table 1

Specimens	Brinell Hardness mm	Mechanical Properties					
		$\sigma_y / \text{kg/mm}^2$	$\sigma_u / \text{kg/mm}^2$	$\delta_0.2 / \%$	$\delta_{10} / \%$	$\delta_{50} / \%$	$E / \text{kg/mm}^2$
Transverse		93,9	80,7	70,1	15,8	49,1	9,7
Vertical	3,65--3,80	94,4	80,3	71,4	17,8	57,6	10,6
Horizontal	(3,70--3,75)	94,15	79,5	72,3	16,1	48,6	8,4
		93,6	79,1	72,5	18,5	61,5	11,0
		92,3	78,5	70,65	15,3	43,1	8,3
		94,0	79,5	70,4	17,8	56,1	11,0

Card 4/4

LEVEL GRAVY, YC 0

## PAGE I BOOK EXPIRATION

307/2/64

Versuchsergebnisse zu optima reihen metall. Letz. Berichte, 1957  
Indirekt metall. Prüfungstechnik. (Dose Metalle und Alloys). Transactions of the  
First All-China Conference on Non-ferrous Alloys. Harbin, Harbinjurgard, 1960.

428 P., 3,150 copies printed.

Sponsoring Agencies: Academy of Sciencs SSSR. Institute metallurgii USSR.

Editor: I.I. Sosulinov. Ed. of Publishing Bureau: G.M. Lomayev; Tech. Ed.:

P.D. Taran'yev.

Purpose: This collection of articles is intended for metallurgical engineers,  
physicists, and workers in the machine-building and radio-engineering industries.

Content: The collection contains technical papers which were presented and discussed at the First All-China Conference on Non-ferrous Alloys held in the Institute of Metallurgy, Academy of Sciences, USSR in November 1957. Results of investigations of non-ferrous alloys, titan, and copper-nickel alloys with additions of rare metals are presented and discussed along with discussions of properties of magnesium alloys and steels in general. The effect of rare-earth metals on properties of castings, precipitating material and various metallurgical processes is discussed. The effect of the addition of certain elements on the properties of non-ferrous and nonmetallic materials is discussed. No general tables are included. Series

## PAGE II. TESTS AND EXPERIMENTS

## ALLOYS WITH RARE-EARTH ELEMENTS

## Rare Metals (Cont.)

307/2/64

- 1-  
-Metallic. Study of the Effect of Rare-Earth Elements on Physico-mechanical Properties of Chrome-Nickel-Molybdenum Steel. 203
- 2-  
-Metallic. I. N. and A. N. Kostylev. Effect of Certain Elements on Properties of Ferromagnetic Alloys. Test for Sharp Casting. 101
- 3-  
-Metallic. Rare Elements as Alloying Additions to Steel and Low Alloy Steel. 114
- 4-  
-Metallic and A. A. Potapov. Effect of Rare-Earth Elements on Certain Properties of Cast Iron. Effect of Rare-Earth Elements on Certain Ferromagnetic and Non-ferromagnetic Steels. Effect of Small Additions of Certain Elements, Boron, Silicon, and Calcium on Properties of Steel-Boron Steels. 111
- 5-  
-Metallic, G. I., and G. L. Potapov. Effect of Zincium on Properties of Steel. 123

Card 7/8

22

VERBOL'SKAYA, Ye. D.; ZASETSKIY, G. F.; ISAKOV, I. V.; KHLERNIKOV, A. Ye.

Vliyaniye sposobov raskisleniya na svoystva khromo-nikel'-molibdenovoy stali.

report submitted for the 5th Physical Chemical Conference on Steel Production,  
Moscow, 30 Jun 1959.

VERBOL'SKAYA, Ye. D., inzh.; ZASETSKIY, G. F., inzh.; ISAKOV, I. V., inzh.;  
KHLEBNIKOV, A. Ye., doktor tekhn.nauk

Treatment of molten steel by rare earth elements. Stal' 20 no.11:1030-  
1033 N '60. (MIRA 13:10)  
(Steel--Metallurgy) (Rare earth metals)

S/133/60/000/011/018/023  
A054/A029

AUTHORS: Verbol'skaya, Ye.D., Zasetskiy, G.F., Isakov, I.V., Engineers,  
Khlebnikov, A.Ye., Doctor of Technical Sciences

TITLE: Experience in the Treatment of Molten Steel With Rare-Earth  
Metals

PERIODICAL: Stal', 1960, No. 11, pp. 1030-1033

TEXT: In order to obtain more information on the possibilities of improving the plastic properties of chrome-nickel-molybdenum alloys by the addition of rare-earth metals, tests were carried out (with the cooperation of Z.B. Vagonov and V.I. Belyayev) by treating these alloys with a mixed metal containing 40-50% cerium, 15-20% lanthanum, 10-20% other rare-earth metals and 5-10% iron. The test steel was melted in an induction vacuum furnace with a magnesite crucible of 150 kg capacity, the charge consisted of armco steel and synthetic iron, the melting temperature was 1,550-1,580°C; the alloying elements were added without affecting the vacuum after a certain interval for the degasification of the metal. Pouring took place in an argon atmosphere at a pressure of 600-700 mm Hg, the test ingots were 140 x 140 mm and weighed about 70 kg. Investigations to determine the influence of the rare-earth metal additives on the sulfur content and on the quantity of non-

Card 1/3

S/133/60/000/011/018/023  
A054/A029

Experience in the Treatment of Molten Steel With Rare-Earth Metals

metallic inclusions revealed that under the effect of rare earth elements the non-metallic phase still forms in the liquid steel before the precrystallization period. The composite inclusions which are formed during this period coagulate easily and float on the surface of the casting. During this floating period these inclusions can be captured in the crust zone of the casting by the growing crystals. The total amount of sulfur in these agglomerations is about 0.18-0.19%, while the liquid steel before treatment with mixed metal contains about 0.024-0.030% S and the finished metal about 0.003-0.016% S. The sulfur residue in the metal decreases in proportion with the increase in the quantity of the mixed metal added, and the longer the metal is kept liquid, the larger is the amount of sulfur inclusions which can be removed from the casting. The quantity of oxide-inclusions also decreases in the rare-earth metal alloyed steels, irrespective of the melting method; only the amount of aluminates increases to some extent. The tests carried out to determine the mechanical properties of the new type steel showed that rare-earth metal alloyed steels of the same composition but cast in open and in vacuum furnaces had practically the same values as regards strength and tenacity, in cast and in Card 2/3

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S/133/60/000/011/C18/023  
A054/A029

**Experience in the Treatment of Molten Steel With Rare-Earth Metals**

rolled condition as well; the steel melted in a conventional furnace has a tenacity 1.5-2.0 times higher than the same type of steel deoxidized by 0.07% Al; when melted in a vacuum furnace, the increase in tenacity is 2-2.5 times greater compared with the Al-treated steels; the steel with a C-content of 0.40% shows the same plastic properties in melted and in rolled condition as the chrome-nickel-molybdenum steels containing 0.30%C and produced in open-hearth furnaces according to the direct reduction process. In the rolled steels containing 0.40% C and alloyed with rare-earth metals no anisotropy in the mechanical properties can be observed at tempering, both as regards the sorbite and the martensite structure. The laboratory tests were confirmed by industrial scale tests in the UZTM. The samples taken from various (upper and lower) parts of the sheets rolled from the testingshots (with a C content of 0.41% containing chrome-nickel-molybdenum deoxidized in the ladle by 350 g/t Al and containing 2 kg/t mixed metal) displayed remarkable chemical homogeneity. Practically no segregation of carbon, sulfur and phosphorus could be observed. From the tests it is assumed that rare-earth metal alloyed chrome-nickel-molybdenum steels can be used in machinery constructions for replacing rolled or hammered machinery parts. There are 2 figures, 6 tables and 3 Soviet references.

✓  
—

KIPRIANOV, A.I.; VERBOVSKAYA, T.M.

Condensation of nitroacetic ester with o-aminophenylmercapton.  
Zhur. ob. khim. 31 no. 2:531-537 F '61. (MIRA 14:2)

1. Institut organicheskoy khimii AN USSR.  
(Benzenethiol) (Acetic acid) (Benzothiazine)

ZUBAROVSKIY, V.M.; VERBOVSKAYA, T.M.

Synthesis of thiazole derivatives. Part 12: Benzothiazolerhodamines.  
Zhur. ob. khim. 27 no.8:2177-2183 Ag '57. (MLRA 10:9)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.  
(Thiazole) (Rhodanine)

1A

21

Brown and hard coal deposits of the western Ukraine districts (formerly part of Poland). S. B. Verbovets, Naukova Dumka, No. 1, 7-10. The brown coals of the western Ukraine contain ash 3.82-7.21, volatile matter 13.33-58.82, hygroscopic H<sub>2</sub>O 7.24-12.07, and S 0.2-7.5%; heating value is 4010-6007 cal. Brown coal from the Kremenchuk area contains H<sub>2</sub>O 13.00-31.00, volatile matter 31.15-47.34, ash 7.71-30.02, S 2.33-1.44%; heating value 13.31-20.43 cal. The hard coals contain H<sub>2</sub>O 0.32-1.06, H 2.03-6.00, C 31.04-81.16, S 1.18-8.00, N 0.03-1.87, O 0.20-7.14, ash 2.73-65.98%; gas yield is 10.14-15.50%; heating value 3338-8522 cal. A. A. Bochtinger.

A10 514 METALLURGICAL LITERATURE CLASSIFICATION

VERBOLOZ, S.

Activity of the All-Union Scientific Research Institute of the Gas  
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(Gas, Natural)

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"Lithology and paleogeography of the Carboniferous pay formation  
of the Donets Basin" by M.V. (N.V.) Lohvynenko. Reviewed by S.IE.  
Verboloz. Geol. zhur. 16 no.4:81-85 '56. (MLRA 10:2)  
(Donets Basin--Geology, Stratigraphic)  
(Lohvynenko, M.V. (N.V.))

YUDENOV, S. YE.

Coal Mines and Mining

Conclusions from the analysis of the thickness of coal deposits in the Donets Basin. Urol' 27 no. 4, (1952)

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED

VERBOLOZ, S.Ye.

Does the Donets Trough exist? Trudy VNIIGAZ no. 25:31-39  
'65. (MIRA 18:12)

V E R B O L I S K A Y A , Y.E.D.

PHASE 2 - TANK LATE 1978

18(1.3)

SCV/34G  
Sovzashchische po priemernym zashchitnym elementam s vysokoy konstruktionsnykh i uchebno-tekhnicheskikh sredstv

spetsial'nykh stekly i spivayos' spetsial'nymi elementy v stekly i alioy: Transactions of a Conference on the Use of Rare Earth Elements To Improve the Physical and Mechanical Properties of Structural and Special Steels. Conference on the Use of Rare Earth Elements To Improve the Physical and Mechanical Properties of Structural and Special Steels. Metallurgizdat, 1959. 266 p. Errata slip inserted. 3,350 copies printed.

Ed. 1. A. A. Proshogin. Ed. of Publishing House: A. L. Gerasimovskaya.

Tech. Ed.: P. D. Ilyen'yev.  
Tech. This book is intended for engineers, technicians and nonferrous scientists engaged in the metallurgy of heavy and nonferrous metals, and may be used by students of higher educational institutions, who are specializing in the metallurgical science of metals, and also by specialists in the metallurgy of rare earth elements and rare earth alloys. The influence of rare earth elements on the properties and uses of rare earth alloys as allowing components in steels and alloys. The influence of rare earth components in improving the technical properties of structural, fire-resistant and other steels and alloys is also described.

Tables and references (mostly Soviet) accompany each figure. No personalities are mentioned.  
Loren, B. I. Candidate of Technical Sciences, Institut Mineralogii, Geokhimi, i Kriptallicheskikh elementov AN SSSR (Institute For Mineralogy, Geochemistry, and Chemical Crystallography of Rare Earth Elements AS USSR). The State of Rare Earth Elements and their Trend in its Development (According to non-Soviet Literature) 5

Yerushkin, V. V., Engineer, Candidate of Chemical Sciences; N. M. Kachalova and R. P. Litsina, Engineers, Methods of Determining Small Amounts of Rare Earth Elements in Steels 26

Savitskaya, Ye. M., Doctor of Chemical Sciences; V. P. Tereshkova, Candidate of Technical Sciences, and V. A. Zaitsev, Engineer, Investigation of the Physicochemical Interaction of Rare Earth Metals With Iron and Steel 31

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Molytov, V. J., Engineer, Dependency of the Mechanical Properties of Structural Steel, STEKNA on Reducing Agents and Methods of Extraction 77

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Tschelikowsky, Ya. D., Engineer; I. V. Isakov, Engineer; and A. Yu. Khlebnikov, Doctor of Technical Sciences, The Effect of Cerium Additives on the Properties of Cr-Mn-No Steel for Shaped Steel Casting 118

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Danilova, O. P., Candidate of Technical Sciences; M. V. Podlazko, R. V. Mal'tsev, Doctor of Technical Sciences, Additives for Welding Titanium Alloys 196

Ioffe, V. M., Candidate of Technical Sciences, and V. M. Bursov, Engineer, Electrochemical Method of Producing Metal Magnesium Alloys for Modified Cast Iron 204

Kopp, L. F., Candidate of Technical Sciences; L. M. Shigisima, Engineer, and O. D. Sudakova, The Problems of Glass for the Low Plasticity of No. 3310 Type Steel at High Temperature and Possibilities of Improving This Condition With Rare Earths 211

VERBOV, A. F.

The reflexology of work. Pod rukhodzhi roditel'ki i s predstavitelem. M., 1926. 167 p.

At head of title: V. M. Bekhterev, L. L. Vasil'ev i A. F. Vertov.

III

VERBOV, A. F.

27082. VERBOV, A. F. Ob osteomiélite  
pri otmorozhenii. (Khirurgifâ, 1945  
god 15, no. 4, p. 40-45) *Title tr.:* On  
osteomyelitis in frostbite.

*Contains a study dealing with lack of  
specificity in frostbite-osteomyelitis; its*

27082 Cont'd

etiology and pathology; causes of osteomyelitis not directly connected with frostbite; characteristic features of frostbite-osteomyelitis; prophylaxis.

*Copy seen: DLC.*

VERBOV, A.F.

Early diagnosis of contractures in osteoarticular tuberculosis. Probl. tuberk., Moskva no.4:44-46 July-Aug. 1950.  
(CIML 20:1)

1. Of the Administration for Sanatoria of the Armed Forces  
in the Crimea.

SAVOSHCHENKO, I.S., dotsent, otd.red.; TSARFIS, P.G., starshiy nauchnyy sotrudnik, red.; VERBOV, A.F., starshiy nauchnyy sotrudnik, red.; VISHNEVSKIY, A.S., prof., red.; PETELIN, S.M., prof., red.; BARANOVSKAYA, L.V., tekhn.red.

[Current problems in balneotherapy; results of a meeting in honor of the 40th anniversary of the Soviet regime] Aktual'-nye voprosy bal'necterapii; itogi nauchnoi sessii, posviashchennoi 40-letiu Sovetskoi vlasti. Stavropol' na Kavkaze, Izd-vo gazety "Stavropol'skaia pravda," 1959. 174 p.  
(MIRA 14:5)

1. Pyatigorsk. Pyatigorskiy gosudarstvennyy nauchno-issledovatel'skiy bal'neologicheskiy institut.  
(HYDROTHERAPY)

YEGOROV, A.P., shofer; VOYTANIK, N.M., shofer; KOZINTSEV, D.K., shofer;  
POLULYAKH, V.Ya., shofer; KAMATSKIY, V.N., shofer; VARSHAVSKAYA,  
A.A., shofer; VATULIN, G.N., shofer; SHANDURSKIY, F.T., shofer;  
YEMEL'YANOV, G.A., shofer; VERBOV, A.G., shofer; DANILETS, P.P.,  
shofer; BOGANCHENKO, V.A., shofer; PRUDNIKOV, A.F., shofer;  
V'YUNIKOV, S.I., shofer; SOLOVEY, I.N., shofer; MURASHKO, D.F., shofer

We prize our workers' honor. Avt. transp. 40 no.12:3-4 D '62.  
(MIRA 15:12)

1. Simferopol'skiy avtobusnyy park (for Yegorov, Veytanik).
2. Simferepol'skiy taksomotornyy park (for Murashko, Kozintsev).
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4. Yevpatoriyskiy avtobusno-taksomotornyy park (for Kamatskiy).
5. Yaltinskiy taksomotornyy park (for Varshavskaya). 6. Feodosiyskiy taksomotornyy park (for Varshavskaya). 7. Sevastopol'skiy avtobusno-taksomotornyy park (for Yemel'yanov). 8. Simferopol'skiy gruzovoy avtopark (for Verbov). 9. 2-y Simferopol'skiy gruzovoy avtopark (for Verbov). 9. 2-y Simferopol'skiy gruzovoy avtopark (for Danilets).
10. Bakhchisarayskiy avtopark (for Boganchenko). 11. Sevastopol'skiy avtopark (for Prudnikov). 12. 1-y Simferopol'skiy gruzovoy avtopark (for V8Yunikov, Solovey).

NIKOL'SKIY, Nikolay Klavdiyevich; BARYSHNIKOV, A.I.; VERBOV, G.D.;  
PYLAYEVA, A.P., red.

[Manual on accounting on state farms and other state agricultural enterprises] Spravochnik po tukhgalterskemu uchenuju v sovkhozakh i drugikh gosudarstvennykh sel'skokhoziaistvennykh predpriatiiakh. Moskva, Kolos, 1965. 415 p.  
(MIRA 18:5)

REF ID: A652

182100

SAC/DO/DO/DO/DO/DO/DO  
E.O./MTC

AUTHOR: Verbovenko, P.N.

TITLE: On the Determination of the Recrystallization Temperatures of Metals. Lett. to the Editor.

PERIODICAL: Fizika metalov i zashchishcheniya, 1969, No. 2, p. 1.

ABSTRACT: To find the recrystallization temperature of metals, A.A. Bocharov's method with a correction (Ref. 1) is used:

$$T_p = \frac{f_p}{f_p + f_D} \cdot 0.373$$

The coefficient  $f_D = T_p/R_p \approx 0.4$  is not strictly constant. It can assume a number of values in the range 0.35 to 0.45. A new relationship for the determination of the recrystallization temperature has been deduced theoretically and proposed by Smirnov (Ref. 2):

$$3Rf_p \left[ 1 - \frac{1}{3} \frac{\theta}{T_p} + \frac{1}{20} \left( \frac{\theta}{T_p} \right)^2 - \frac{1}{T_p^2} \left( \frac{L}{R} \right)^2 \right] = L_0 \quad (1)$$

Card  
1/3

where  $T_p$  is the recrystallization temperature,  $\theta$  = Debye temperature,  $L_0$  = heat of fusion.  $R = 865$

REF ID: A6497

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On the Determination of the Recrystallization Temperatures of Metals. Letter to the Editor

constant. This relationship was developed on the assumption that the most favourable conditions for recrystallization arise when the heat content of the metal exceeds the heat of fusion. The above relationship (Eq 2) makes it possible to give a physical interpretation of the coefficient  $\beta_1$  and to explain its deviation from the average value, which is the aim of this communication. Substituting in Eq (2) the expression for the heat of fusion  $L_a = Rf_m$ , where  $f_m$  is the melting point, we obtain:

$$3T_p \left[ 1 - \frac{2}{3} \frac{\theta}{T_p} + \frac{1}{20} \left( \frac{\theta}{T_p} \right)^2 - \frac{1}{1360} \left( \frac{\theta}{T_p} \right)^3 \right] = T_p \quad (3)$$

For the majority of metals  $\theta < T_p$ , hence in Eq (3) we can confine ourselves to the first two terms, after which this equation assumes the following simple form:

$$3T_p \sim \frac{2}{3} \theta \approx f_m$$

Card  
2/3

(+) ✓

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S7121/031

On the Determination of the Recrystallization Temperatures of Metals. Letter to the Editor

$$T_p \approx \frac{T_h + \theta}{3} \quad (5)$$

The values of  $T_p$ , as calculated from Eq (5), give satisfactory agreement with values of  $T_p$  calculated from Eq (1). Moreover Eq (5) combines similar characteristics of corresponding states of the metal. All this justifies Eqs (1) and (5) and the coefficients  $a_1$  and  $b_2$  to be equated, i.e.,  $a_1 = b_2$ . From Eq (5) the coefficient

$$b_2 = T_p/T_h \approx 1/3 (1 + \theta/T_h).$$

Thus it is possible to say that variations in the values of the coefficient  $b_2$  within the limits of 0.35 to 0.45 depend on the variation of the ratio  $\theta/T_h$ .

Card  
3/3

There are 5 Soviet references.  
This is a complete translation.

ASSOCIATION: Ural'skiy turbomotornyy zavod  
(Ural'sk Turbine Factory)

SUBMITTED: February 7, 1959

X

"APPROVED FOR RELEASE: 09/01/2001

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CIA-RDP86-00513R001859420011-0"

VERBOVENKO, P. K.

AUTHORS: Verbovenko, P. K., Fakidov, I. G. 39-2-27/3

TITLE: Concerning the Problem of Gamma-Ray Logging (K voprosu o gamma-gamma-karotazhe).

PERIODICAL: Atomnaya Energiya, 1958. Nr 2, pp. 210-211 (USSR)

ABSTRACT: The logging is done by measuring the decrease in intensity of a point source in dependence on the density of the material bored. This function  $J = J(\rho)$  according to reference 2 has the form 
$$J = \frac{Q}{780\pi} \rho^2 \frac{e^{-Q\frac{R}{\rho}}}{R} \quad 1)$$
 where Q is the intensity of source; R denoting the distance between source and detector;  $\rho$  - the density of the medium scattering the gamma-rays. In the work mentioned in reference 3 the following function is given:  $J = \rho / e^{-0.06\rho} \quad 2)$

From calculations by the author and comparisons with the experimental values the following formula was found:

$$J = k \rho^2 e^{-\lambda \rho} \quad 3)$$

k and  $\lambda$  denoting constants of the probe which are not dependent on the intensity of the gamma-source. Formulae 1) and 2) can

Card 1/2

Concerning the Problem of Gamma-Ray Logging.

82-2-21/35

only be used for calculations of intensity in the case of large probes, formula 2) being less sensitive toward the limitation of diffusion  $R > L$ . Formula 3) can be used for large as well as for small probes.

There are 1 figure and 3 Slavic references.

SUBMITTED: August 10, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Gamma rays-Measurement    2. Gamma rays-Intensity

VERBOVENKO, P.K.; FAKIDOV, I.G.

On gamma-ray logging. Atom.energ. 4 no.2:210-211 7 '58.  
(Prospecting--Geophysical methods) (MIRA 11:4)  
(Gamma rays--Industrial applications)

DAVIDOV, V.I.; BELIKOV, A.M.; IGNAT'YEVA, N.I.; VERBOVETSKAYA, D.Ye.

Reaction of germanium dioxide with iron. *Zhur.prikl.khim.* 35 no.11:  
2543-2546 N '62. (MIRA 15:12)  
(Germanium oxide) (Iron)

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PHASE I BOOK EXPLOITATION

1059

Verbovskiy, Grigoriy Gavrilovich, Professor

Raschety zubchatykh i chervyachnykh peredach; osnovy teorii i primery raschetov (Gearing and Worm Gearing Design; Fundamentals of Theory With Design Examples) Khar'kov, Izd-vo Khar'kovskogo univ-ta, 1958. 147 p. 10,000 copies printed.

Resp. Ed.: Stolbovoy, S.Z., Candidate of Technical Sciences, Docent;  
Ed.: Vaynberg, D.A.; Tech. Ed.: Trofimenko, A.S.

PURPOSE: This book is intended as a textbook for students of mechanical and machine-building faculties of vtuzes, and may also be used by engineering and technical workers in plant engineering departments and in engineering establishments.

COVERAGE: The author makes generalizations on the basis of data taken from the literature cited and experience gained in the design of gearing transmissions for production. Modern methods of design of gearing and worm gearing are presented, including a brief interpre-

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Gearing and Worm Gearing Design (Cont.) 1059

tation of fundamentals, examples and data necessary for design. The author thanks the staff of the machine parts department of the Khar'kovskiy institut inzhenerov zheleznodorozhnogo transporta imeni S.M. Kirova (Khar'kov Institute of Railway Transport Engineers imeni S.M. Kirov) and also Professor P.P. Petrosyan and Docents S.K. D'yachenko and V.V. Karpenko for their help in preparing the book. There are 38 Soviet references.

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